



Appl. No. 09/633,801
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Commissioner for Patents

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DECLARATION UNDER 37 CFR 1.131

Sir:

I, George Hsu, declare as follows:

At the time of the invention I was an employee of PNI Corporation (assignee of the present application); I am the inventor of the patent application identified above.

The invention, as described and claimed in the present patent application was conceived in this country by the inventor before November 18, 1999, as evidenced by the following attached exhibits.

Exhibit "A" includes true and correct copies of several slides from a company presentation by PNI Corporation CEO Becky Oh on Dec. 10, 1999.

Slide A-1 discusses and is evidence of three key facets of the present invention:

1. The concept of centralized internet-based functional control of devices, sensors and actuators (bullet point 4) and internet-based User Control Interfacing (bullet point 5)

are clearly shown.

2. A Base-Station (Cube in conjunction with server-based CCP [Cube Control Protocol]) for PNI proprietary power-line and RF-based devices, sensors and actuators is evident from bullet points 2 and 3. The "Cube" was PNI's internal name for the hardware portion of a base-station, as described in the instant application. PNI Web Active Home was PNI's proprietary X10-based enhanced power-line communication protocol.
3. Support for existing X10 devices (referred to as "Firecracker") to leverage existing home automation devices is shown in bullet point 1. X10 was the existing de facto low cost power-line device standard. It was based on user-operated switches (such as light switches) and user-operated remote controls. There was no centralized intelligence capability for these devices at the time.

Slide A-2 shows a system level block diagram of one embodiment of the present invention. The Cube is the base-station for the PNI proprietary devices, sensors and actuators both via RF as well as power-line. Its internet connectivity is provided via the box labeled "ccp", which can be a router or PC, running UNIX or LINUX or other gateway device. The "Firecracker" is a bridge to existing X10 devices.

Slide A-3 clearly shows the functionality of unrelated services from a second server in conjunction with the home control provided by the first. **PNI.com** is the home automation control site which provides the primary home automation control features and services, while bullet point 2 and especially bullet point 3 show several unrelated services such as video feeds (entertainment or security) and weather information.

Slide A-4 re-iterates many of the basic concepts of the present invention already discussed, but in particular, bullet point 2 mentions the "Natural Language Script", remote access and monitoring. The "Natural Language Script" is a PNI web-based User Interface programming language, while the notion of remote access and monitoring speak to actuator and device control on a remote basis via the internet.

Exhibit "B" is a true and correct copy of a presentation made to K-Mart on February 15, 2000.

Slide B-1 shows the mockup of the concept of a PNI.com enabled automation and control window provided by PNI's servers (a 1st Server) to a third party's regular portal website (hosted on a separate 2nd server). In this case the discussions were with K-Marts' online portal Bluelight.com. These discussions were presented under non-disclosure to K-Mart. The notes in the margins are self-explanatory and clearly support possession of the present invention. In addition, please pay particular attention to the bullet point "No mail today" and the "Most current picture" link which clearly show non-related services such as mail aggregation and video functionality (for purposes of security in this particular example).

On or about December 15, 1999, I completed an invention disclosure form that disclosed the PNI web-based home automation control system and concept.

On January 4, 2000, patent application 09/477,226 was filed with the U.S. Patent Office; on May 11, 2000 patent application 09/569,746 was filed; on August 7, 2000 the current application 09/633,801 was filed. All three applications disclose distinctive embodiments of a common theme.

Applicant claims priority for the present, non-provisional patent application, 09/633,801 to the company presentation on Dec. 10, 1999 for matter disclosing one remote server. Applicant claims priority to the K-Mart presentation of February 15, 2000 for disclosure of a second server in alternative embodiments of the instant invention.

I declare further that all statements made herein are true and that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this document and the patent application to which it relates.

Date: March 2, 2007






Signed: _____


George Hsu

Exhibit A

Slide A-1

PNI.com

-  Initially support installed base of X10 devices and controls via the internet.
-  Support PNI Web Active Home: X10 based PNI devices.
-  Work seamlessly with the Cube and its Devices.
-  Expand to support all major device protocols via the internet.
-  The central web site for Home Automation: The current Home Automation market is fragmented.


The diagram illustrates the PNI.com system architecture. At the top center is a box labeled 'Cube'. To its right is a box labeled 'ccp'. Below 'Cube' is a box labeled 'Device 1'. To the right of 'ccp' is a box labeled 'Firecracker'. Below 'Firecracker' is a box labeled 'PNI.com'. To the right of 'PNI.com' are two boxes labeled 'X10' and 'LonWorks'. Below 'X10' and 'LonWorks' is a box labeled 'PNI.com'. Below 'PNI.com' is a box labeled 'Power line'. The connections are as follows: 'Cube' is connected to 'Device 1' by a double-headed arrow. 'Cube' is connected to 'ccp' by a solid line. 'ccp' is connected to 'Firecracker' by a solid line. 'Firecracker' is connected to 'PNI.com' by a solid line. 'PNI.com' is connected to 'X10' and 'LonWorks' by a solid line. 'X10' and 'LonWorks' are connected to 'PNI.com' by a solid line. 'PNI.com' is connected to 'Power line' by a solid line. 'Device 1' is connected to 'X10' and 'LonWorks' by dashed arrows. 'X10' and 'LonWorks' are connected to 'PNI.com' by dashed arrows. 'PNI.com' is connected to 'Power line' by a dashed arrow.


Diagram illustrating the PNI.com system architecture and connections:


- Central Components:**
 - Cube:** The main control unit.
 - ccp (Control Computer Processor):** Connected to the Cube via a **Serial port connection**.
 - Firecracker:** Connected to the ccp via a **Serial port connection**.
 - PNI.com:** The central communication hub, connected to the Firecracker via a **Serial port connection**.
- Networks and Devices:**
 - X10 Interceptor Device:** Connected to the PNI.com via **RF communication**. It is noted: "This device will control existing X10 networks through PNI.com".
 - LonWorks Interceptor Device:** Connected to the PNI.com via **RF communication**. It is noted: "This device will control existing LonWorks networks through PNI.com".
 - Power line:** The physical infrastructure for the X10 and LonWorks networks.
- Other Components:**
 - Device 1:** A peripheral device connected to the Cube via **RF communications**.

Slide A-3

PNI.com Revenue Model

 Web Site advertising: PNI.com is a “sticky sight”.

 Paging or email services.

 Data storage and information processing:

- Frequent updated status of devices.
- History of information from devices compressed for storage. Information such as video, weather etc.

Slide A-4

PNI

- ❑ Continue to develop and sell sensor based automotive consumer products.
- ❑ Create PNI Web Active Home: Home automation kit that uses X10 protocol. Includes software that allows access via PNI.com and includes X10 devices that are configured to take advantage of the easy programming provided by the “Natural Language Script”, remote access and monitoring.
- ❑ Create the Cube and Devices that will over come the limitations of the current protocols on the market such as X10, LonWorks and Cebus.
- ❑ Create Devices which will enable easy incorporation of different automation networks to the Cube.
- ❑ Constant innovation of the Cube and Devices make PNI.com competitive.

Exhibit B

Best Available Copy

Slide B-1

The screenshot shows a web browser window displaying the Yahoo! BlueLight K website. The browser's address bar shows "http://bluelight.k.yahoo.com/". The website has a navigation bar with "Welcome, Richard!" and links for "Yahoo! - Update - Account Info - Help - Sign Out". Below the navigation bar, there's a "My Front Page" section with a "Valentine's Day: Chocolate & Candy, Free Flower Offer, Free Gift" banner. The main content area is divided into several sections: "My Front Page Headlines - Feb 11 3:05pm ET" with top stories from Reuters; "Current Events - Yahoo! Full Coverage - Feb 11 2:40pm ET" with links to N. Ireland Peace Crisis, Bomb Explosion on NY's Wall St., and African Hijack Hostages to Head Home; and "Maryland - Feb 11 5:20am ET" with a link to state-based news from ABC News. On the right side of the website, there's a "My BlueLight Home" section with a list of features: Temperature, indoor; Temperature, outdoor; Living Room Lighting; Last Minute; Alarm; Blinds; No mail today; and a link to "Block current picture". Below this is a "Portfolios" section with a "Quotes" table showing DJIA at 10529.26 and a "Get Quotes" button. To the right of the website screenshot, there's a dark grey box with white text. It contains a quote: "This is home automation. And demand for is considerable. One estimate puts the market at \$23 billion in less than 5 years. But barriers to entry will be high. Whoever takes the lead in online home control will have a huge advantage over its competitors." Below the quote, there's a section titled "What we already have:" followed by a list of three items: 1) a wireless hardware protocol, 2) appliance-control software, and 3) a personal home-control website that gives consumers a "ground zero" for their controllable appliances and encourages them to "try before they buy". Below this list, there's another section titled "What we're missing:" followed by a list of one item: 1) A world-class retailer for consumers to hyperlink to when they're ready to implement their personal home-control solution. At the bottom of the dark grey box, there's a link that says "Click for more".

My Yahoo! for rgampell - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Downloads Fullscreen

Address http://bluelight.k.yahoo.com/

YAHOO! BLUELIGHT K

Welcome, Richard! - Yahoo! - Update - Account Info - Help - Sign Out

My Front Page Add Page - Options

Valentine's Day: Chocolate & Candy, Free Flower Offer, Free Gift

My Front Page Headlines - Feb 11 3:05pm ET

Top Stories from Reuters Feb 11 2:45pm ET

- Wall Street Blast Not Seen As Terrorist Act
- No Time Limit Set on Irish Suspensions
- Bush Lashes McCain Who Complains of Smear Campaign

Current Events - Yahoo! Full Coverage Feb 11 2:40pm ET

- N. Ireland Peace Crisis
- Bomb Explosion on NY's Wall St.
- African Hijack Hostages to Head Home

Maryland Feb 11 5:20am ET

- State-based news from ABC News will be discontinued as of Jan. 1, 2000

My BlueLight Home

- Temperature, indoor >> 67 deg
- Temperature, outdoor >> 30 deg
- Living Room Lighting >> on
- Last Minute >> 3:45p
- Alarm >> armed
- Blinds >> closed
- No mail today
- Block current picture

Portfolios

Quotes

DJIA	10529.26	-237
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Get Quotes

Stock Market Toolbar - Java MISC

quotes delayed 10 mins - 1 year last 14 hrs

This is home automation. And demand for is considerable.

One estimate puts the market at \$23 billion in less than 5 years.

But barriers to entry will be high. Whoever takes the lead in online home control will have a huge advantage over its competitors.

What we already have:

- 1) a wireless hardware protocol
- 2) appliance-control software
- 3) a personal home-control website that gives consumers a "ground zero" for their controllable appliances and encourages them to "try before they buy"

What we're missing:

- 1) A world-class retailer for consumers to hyperlink to when they're ready to implement their personal home-control solution.

Click for more